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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/096,858 06/12/98 NARWANKAR P AMAT2571.US/

MM91/1106

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EXAMINER

MAI, A

ART UNIT

PAPER NUMBER

2814

DATE MAILED:

11/06/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Applicati n No.

09/096,858

Applicant(s)

NARWANKAR ET AL.

Examiner

Anh D. Mai

Art Unit

2814

-- The MAILING DATE f this communication appears on the cover sheet with the correspondence address --

Peri d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2000.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disp sition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 33-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

1. Claims 1, 2, 4-7, 8-12, 14-17, 19 and 21-23 are rejected under 35 U.S.C. 103(a) for being unpatentable over Carl et al. (U.S. Patent No. 5,468,687) in view of Slomowitz (U.S. Patent No. 4,888,088) as previously applied.
2. Claims 3, 13, 18 and 20 are rejected under 35 U.S.C. 103(a) for being unpatentable over Carl '687 and Slomowitz '088 as applied to claims 1, 8 and 14 above, and further in view of Hasegawa (U.S. Patent No. 5,677,015) as previously applied.
3. Claims 1-23 are rejected under 35 U.S.C. 103(a) for being unpatentable over Hasegawa '015 in view of Slomowitz '088 as previously applied.
4. Claims 24-31 are rejected under 35 U.S.C. 103(a) for being unpatentable over Hasegawa (5,677,015) in view of Slomowitz '088 as previously applied.
5. Claim 32 is rejected under 35 U.S.C. 103(a) for being unpatentable over Hasegawa, in view of Slomowitz, as applied to claim 24 above, and further in view of Nishiki et al. (U.S. Patent No. 5,989,782) as previously applied.

Response to Arguments

6. Applicant's arguments filed August 21, 2000 have been fully considered but they are not persuasive.

Contrary to applicant's assertion that the references fail to teach the invention as claimed, the combination of the references teaches a method of forming a dielectric on a substrate using species generate remotely.

Applicant defines: the *plasma creates electrically neutral highly energized atoms from the molecular anneal gas*. (page7). Thus, the species that are generated in the plasma chamber of Carl or Hasegawa are *electrically neutral highly energized atoms* or active atomic species. The difference between Carl and Hasegawa and the presently claimed invention is the remotely generated active atomic species. Slomowitz teaches the active atomic species can be created remotely. Therefore, the combination of the references clearly shows the obviousness of the present claims.

The Applicant's position regarding the teaching of the references appears to be inconsistent at best. In previous argument dated 1/27/2000, Applicant acknowledged that Hasegawa and Carl generated active atomic species and annealing the substrate with the atomic species in one chamber. (page 4, second paragraph). Now, Applicant argues that Hasegawa and Carl generate plasma or an ionized gas instead of active atomic species.

The claims are obvious over the cited references. The rejection of the claims under 35 U.S.C. 103(a) for being unpatentable over prior arts are therefore, maintained.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh D. Mai whose telephone number is (703) 305-0575. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (703) 306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A M.
Anh D. Mai
October 31, 2000


Olik Chaudhuri
Supervisory Patent Examiner
Technology Center 2800